

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims**

Claims 1-27 (Cancelled).

Claim 28 (New): An optical apparatus comprising:

a plurality of optical input paths;

a plurality of optical output paths;

a plurality of optical converters coupled between each of the optical input paths and each of the optical output paths;

a controller coupled to the plurality of optical converters and configured to control an optical conversion of an optical input signal to an optical output signal, wherein

the optical input signal and the optical output signal have a same information content; and

the controller is configured to control a modulation frequency of each of the optical output signals.

Claim 29 (New): The optical apparatus of Claim 28 wherein the controller is configured to control a wavelength of the optical output signal.

Claim 30 (New): The optical apparatus of Claim 28 wherein the controller is configured to control an interconnection of the optical input paths with the optical output paths.

Claim 31 (New): A method for optical signal conversion comprising:

receiving a plurality of optical input signals through a plurality of optical input paths;

converting the plurality of optical input signals into a plurality of optical output signals;

controlling a modulation frequency of each of the optical output signals; and

transmitting the plurality of optical output signals through a plurality of optical output paths, wherein

the optical input signals and the optical output signals have a same information content.

Claim 32 (New): The method of Claim 31 further comprising:

controlling a wavelength of each of the optical output signals.

Claim 33 (New): The method of Claim 31 further comprising:

controlling an interconnection of the optical input paths with the optical output paths.